## Pre-Class 13: Chain Rule

[SCS4049] Machine Learning and Data Science

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## Chain rule

**Chain rule**: a formula for derivatives of the composition of two or more functions

$$\{f(g(x))\}' = f'(g(x)) \cdot g'(x)$$
 (1)

$$\frac{df}{dx} = \frac{df}{dq} \frac{dg}{dx} \tag{2}$$